WI-FI REELS

User manual

Contents

*For Wi-Fi Versions only

Warranty Terms and Conditions

By purchasing a Hathorn push camera (Product) from Minicam Inc, you accept the terms of this limited warranty. You also agree that Minicam Inc shall have no liability to you or any end user for any damages resulting from delay or loss of use of the Product due to failure of the Product within the warranty period, or otherwise, or in service or repair. Minicam Inc shall have no liability for general, special, incidental, or consequential damages arising out of the use or misuse of Minicam Inc Product.

You also agree that the application and use of a Minicam Inc Product is beyond our control and is the sole responsibility of the user. By receiving and using one of Minicam Inc Products, you hereby acknowledge and agree that: you have selected the correct product for your intended use and will examine the product you are purchasing when it arrives to ensure that it meets your needs, you will properly test the product prior to its actual use, you and/or your organization have proper practices in place for the safe use of this equipment and that end users have been trained on its safe operation.

Minicam Inc Products are not intrinsically safe, not explosion proof, and misuse of the product may cause physical or psychological injury, pain, suffering, illness, disfigurement, temporary or permanent disability, economic or emotional loss or death; and Minicam Inc shall not be held liable for any damages, including but not limited to direct, indirect, special, or consequential damages arising out of, resulting from, or in any way connected to the improper or incorrect use of the

Product and assumes no responsibility for other's use of the Product.

Not covered by Warranty

This one (1) year Limited Warranty does not cover damage or malfunctions stemming from other than normal and proper usage or from Products not meeting the requirements of end users. This Limited Warranty also does not cover the following: (a) intentional or accidental misuse or abuse (including, but not limited to, damage to push rod from excessive force), (b) fail¬ure to follow operating or maintenance instructions, (c) repairs by any individual or entity other than an authorized Minicam Inc repair center, (d) use of Product components, accessories or consumables not manufactured by Minicam Inc (e) product tampering, (f) droppage, (g) battery leakage if equipped, (h) media cards, (i) excessive light damage to the camera element or (j) damage resulting from being used in extreme environments or due to weather events. Wear and tear are not covered.

Minicam Inc responsibility under this Limited Warranty is limited to the repair, adjustment or replacement of defective parts as determined by Minicam Inc in its sole discretion. Minicam Inc shall not be held liable for any damages, including, but not limited to direct, indirect, special, or consequential damages arising out of, resulting from, or in any way connected to the use of Minicam Inc Products. Minicam Inc assumes no responsibility for other's use or misuse of its Products. Minicam Inc assumes no responsibility for warranties either expressed or implied.

Service

If the product requires service, please contact a Minicam Inc authorized service center. Some service locations are listed in this document (Page 17). The remainder can be found on our website.

After requesting a Return Merchandise Authorization (RMA), ship the item PREPAID and INSURED to the appropriate service center. Minicam Inc is not responsible for damages or loss incurred in connection with mailing and/or transportation of products.

Return Freight

Warranty: Pre-Paid by customer as above, returned by Minicam Inc on our account.
Non-Warranty: Freight paid by customer both directions.

Non-Warranty Charges

Repairs centers will charge direct for non-warranty repairs and may require payment prior to repair.

DECLARATION OF CONFORMITY

CE Declaration

We Minicam Ltd, Raven Locks, Unit 33-35 Ravenscraig Road, Little hulton, United Kingdom, M38 9PU hereby declare that the product Hathorn H7 to which this declaration refers is in compliance with the following standards or standardizing documents:

EN61326-1: 2021 Electrical equipment for measurement, control and laboratory use – EMC requirements - Part 1: General requirements
ETSI EN 300 328

The following are the stipulated operating and environmental conditions for said compliance:
Residential, business, commercial, small-company and light industrial environments.
This declaration is based on test report(s) of the relevant EMC testing laboratory.

Authorised representative in the EU: Authorised representative in the United States:
InPipe GmbH Minicam Inc
Jägerwinkel 1a, 12600 Newburgh Road,
6991 Riezlern, Livonia,
Austria MI 48150
United States

FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

ISED

This digital apparatus complies with Canadian ICES-003. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

ACMA

This multimedia equipment complies with AS/NZS CISPR 32:2015 AMD1:2020. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Health and Safety

This equipment is primarily used for inspecting sewer pipes by professionals operating in the sewer and plumbing industry and maintained by professionals familiar with the health risks of maintaining equipment in a sewer. Such professionals should be protected by their company's recommendations and work practices.

Always be aware of your surroundings and keep all electrical connections dry and off the ground. Do not work near open pits or traffic. Hathorn recommends that users wear personal protection such as eyewear, rubber gloves, and non-skid safety shoes.

Worksite Safety

Use your company's or other applicable safety codes and rules when using this equipment. Do not use this equipment in any area with the presence of flammable liquids, gases, and heavy dust. Minicam Inc Hathorn's inspection cameras are not explosion proof nor are they intrinsically safe.

Equipment Safety and Durability

- Do not open the enclosures (housings) of the control module or camera heads.
  Opening the housings, control module, or camera head will void any warranty.

- Use only the leads supplied with the control module for AC or DC operation.

- Minicam Inc Hathorn tools accept only Milwaukee® M18 18V batteries or equivalent. Batteries must be removed from the equipment when not in operation. Failure to do so can resultin damage to your camera or the battery.

- Do not use pressure washers to clean the reel or other camera system parts. Pressure washing any part of your Hathorn camera will cause internal damage which is not covered by your warranty.

- Do not soak the spring termination parts or the camera heads in bleach or other chemicals.

- This product is not designed for and should not be used to inspect oil or other petrochemical pipes.

PRODUCT FEATURES

hathorn

• Compatible with 18V Milwaukee or compatible batteries (not included)

• Stream video directly to your mobile device using Wi-Fi transmission -supports Apple and Android

• Monitor free reel, NO cords, NO heavy monitor cases

• Powerful 512 Hz or 640 Hz SONDE transmitter

• Auto-iris camera element that automatically adjusts picture lighting, no LED light dimming required

• On screen resettable footage counter

• Easy wireless video transfer from reel to any mobile device or tablet, connects up to four Wi-Fi devices

• Record in compressed video saved to your phone, easily manage video files and snapshot pictures, files can be air-dropped, texted, or emailed

• No option to pause during recording is available.

• Voice recording overlay to keep you hands free without the need to add text

• Free downloadable Wi-Fi app from Minicam Hathorn

• Transmission distance with no obstacles is around 50ft.

HATHORN® WI-FI REELS

CAMERA REELS

Display

Size & Display	Dependent upon Apple/Android device

Power

Battery (not incl.)	Only Milwaukee® M18 18V or equivalent*
Battery Life	~ 12Hrs. using 3.0Ah
AC/DC Adapter	12V - 4.1A (included)

Recording, Storage & Features

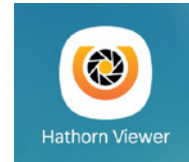|	
Video Recording	MPEG4
Screen Shot	JPEG
File Storage	Mobile device, cloud or USB
Footage Counter	Meters or feet - resettable
Sonde Frequency	512 Hz or 640 Hz High Power Sonde
Push Rod	HDPE - 100 ft. (30.4 m) of 1/4"
Start Up Time	~15 seconds

Environmental

Water Resistance - Camera and Rod	IP68 to 60psi
Water Resistance - Reel Hub	IP65
Operating Temperature	-14°F to 122°F (-10°C to 50°C)
Storage Temperature	-4°F to 140°F (-20°C to 60°C)
Wi-Fi Frequency	EEE802.11b/g/n

Wi-Fi User Instructions*

Download the Wi-Fi App

- Turn on the mobile device and enter App Store for either Apple or Android
- Search for the Hathorn Viewer app) latest version Install the app software
- Note: You must be running iOS 13 or later for Apple

Setting Up the System

Connect DC power plug to the jack on the reel hub using AC/DC adapter or 18V external battery.
At this point, you should have lights on the camera.

Access Wi-Fi connections on your device and select the one named "Hathorn #######". Enter password 12345678.
Exit then open the "Hathorn Viewer" app and click "**CONNECT**". At this point you should have video on your screen.

<u>NOTE:</u>
That this network connection will block all data to the device until the connection is forgotten or another network selected.

⬅	BACK
🔴	RECORD / STOP
📷	SCREEN SHOT
📁	PHOTO FOLDER
⬜	CHANGE SCREEN RATIO

*For Wi-Fi Versions only

VIDEO VIEWING & RECORDING

Open the a pp and click "CONNECT". If the connection between the camera and the mobile device was successful, the video will begin playing automatically. If it does not, then repeat the Wi-Fi pairing steps. No option exists to pause during recording. If you wish to pause simply stop the recording and start a new one.

All pictures and videos are stored in the photos folder of your device.

> **NOTE:**
> **You must allow the app to access to your photos folder when installing the app. If you do not then videos will not be saved**

Audio Recording

Upon pressing "RECORD" for the first time the app will ask you if you wish to record audio. If you do, then push "YES". The app will then ask to have access to your microphone, click "YES". You are now recording audio for the entire duration of the video recording.
Note: You cannot turn audio recording off and on during inspection. You will need to start a new recording to change.
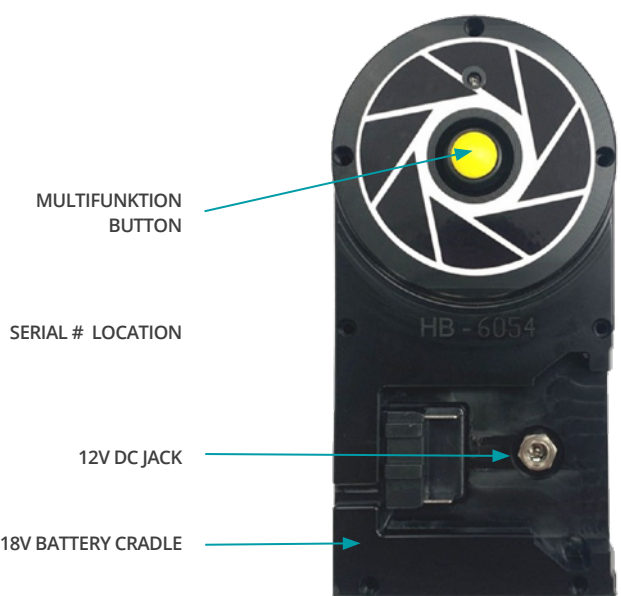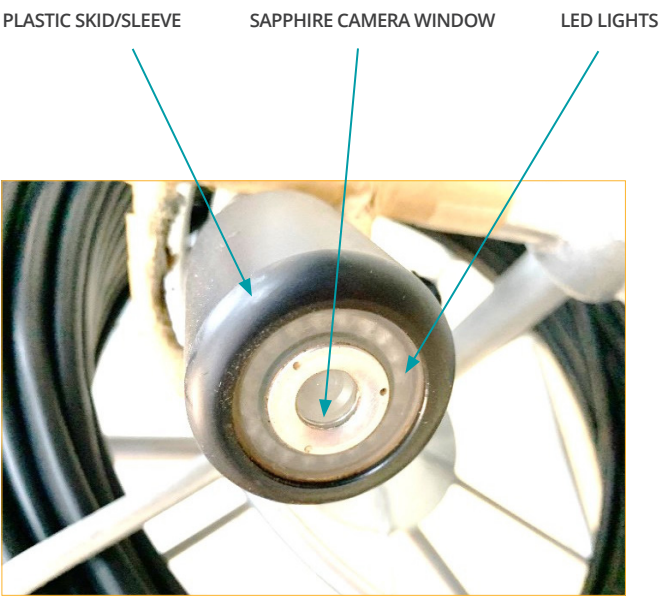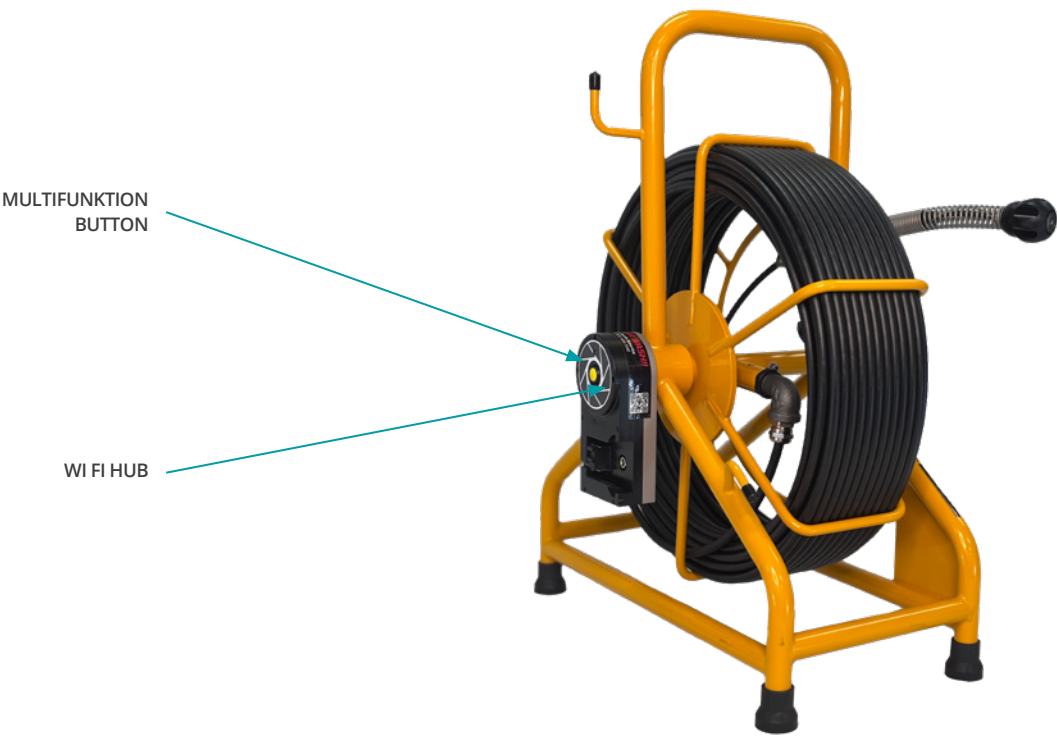
Saving a Recording

To save a recording simply press the "STOP" button. You MUST wait until the application has success-fully saved the file to your device. The app will prompt you when this has been completed. Failure to wait until the app has saved the file will result in the recording being lost. Similarly, selecting another app or maximizing a phone call during recording will close the app down and cease recording prior to being saved.

Footage Counter

The yellow multi-function button on the hub controls the footage counter position on the screen as well as resets the footage counter. Press the yellow multi-function button once and the screen position moves. Press the yellow multi-function button for 3 seconds and the footage counter will be reset to 0ft/0m.

FEATURE IDENTIFICATION

MULTIFUNKTION BUTTON

WI FI HUB

PLASTIC SKID/SLEEVE   SAPPHIRE CAMERA WINDOW   LED LIGHTS

MULTIFUNKTION BUTTON

SERIAL # LOCATION

12V DC JACK

18V BATTERY CRADLE

HB - 6054

HATHORN® WI-FI REELS

User Instructions

Turning Your Monitor On

Insert the battery to turn on the controller and initiate the display. System will turn on automatically.

> **NOTE:**
> **It is good practice to remove batteries from electronic equipment after use. Failure to do so may result in the batteries being drained over extended periods.**

Turning the Sonde On /Off

On the main screen, push and hold the MULTI-FUNCTION BUTTON until the footage counter stops flashing to turn the sonde on or off. Sondes are locatable up to ~15ft depth, dependent upon the type of pipe (concrete/steel/cast iron) and the presence of thick concrete, sand, or other utilities.

Footage Counter Reset

Press and hold the MULTI-FUNCTION BUTTON until the counter starts flashing. Once the counter is flashing, release the button to reset the counter to zero.

INSPECTION PROCEDURE

Skids or sleeves should ALWAYS be used to protect the camera head. Depending on the size of the pipe you are inspecting, you may need to use a skid, so the camera is centered or off the floor of the line. Care should be taken so the skids do not snag in the line.
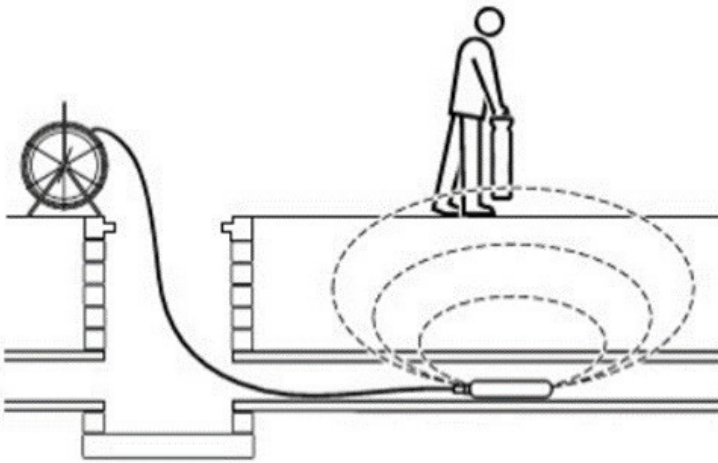
Under normal operating situations, the camera is used with a smaller protective sleeve in lines under 100 mm (4") in diameter, or a larger grooved skid in 100 mm (4") lines or larger.

1. Slowly push the camera into the pipe and maneuver the camera into position to feed down the pipe, making sure the flex neck does not kink or double back on itself.

2. Push the camera slowly and carefully during the inspection, taking note of the conditions of the pipe for possible hazards that may entangle or damage the camera on entry or retrieval.

3. When maneuvering a corner, care should be taken not to butt the nose of the camera against the sidewall with any force. It would be better to let the camera "work" its way around the corner. If resistance is encountered when turning the corner and there are no visible signs of blockage, turning the push rod or pulling the camera back and forth sometimes helps.

4. Should resistance become extreme, or the camera gets entangled or stuck, slowly push it back and forth to free it. Sometimes, turning the push rod may also help. If the camera is visible, you may be able to free it with your hand or by some other means.

5. Upon completion of the inspection and retrieval of the camera, it may be necessary to 'manipulate' the camera around the initial bend (clean out) in the pipe with a pole or other device if required.

6. **NEVER** use the camera to unclog a drain or clear debris in the pipe.
   Doing so can cause damage to the camera head or lens.

7. **NEVER** force the camera down a pipe as this may cause a kinked cable, which will require expensive repairs.

8. **NEVER** use a pressure washer to clean any part of the system. High pressure water can cause degradation of the electronic parts, causing damage.

9. **NEVER** unspool all of the rod from a reel. Always leave a few turns of rod on the reel to aid with respooling.

SONDE SIGNAL LOCATION

Locating the Sonde Signal (512 Hz or 640 Hz)

Insert the sonde into the drain and locate it while it is still just in view at the drain or duct entrance. Hold the locator vertically - directly over the sonde with the antenna in line with the sonde. Adjust the locator sensitivity so the bar graph reads between 60% and 80%. Push the sonde along the pipe to the desired area.

1. Approach the peak of the signal, working perpendicular to the pipe. Move the locator backwards and forwards and stop when the bar graph indicates a Peak.

2. Push the camera 1-2 meters (4-6 ft) further, pinpoint, and mark the position. Repeat this pinpointing procedure at similar intervals along the line of the drain or duct until the survey is completed.

3. Most locators will automatically display the depth of a located sonde, provided the locator is correctly oriented and positioned above the sonde

MAINTENANCE

Inspection Camera

After every use, the camera should be cleaned and checked for possible damage. External scuffing of the camera case is normal and should be of no concern. The camera view port is made of sapphire and should be cleaned with a soft, damp cloth. Grease, dirt or scratches will affect the quality of the video and if the lens is badly scratched it should be replaced.
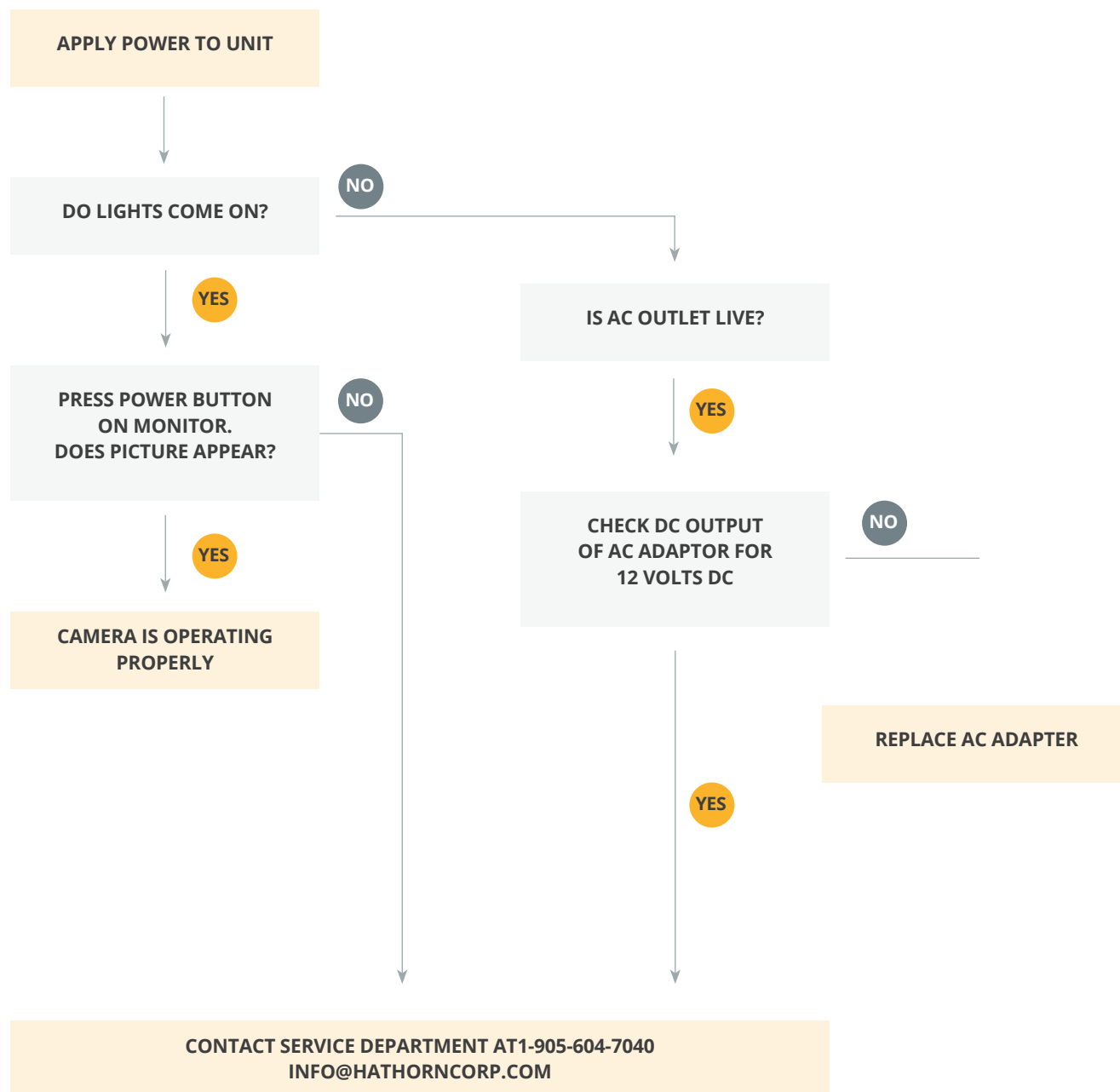
LED Light Replacement

The camera heads use LED lighting and cannot be replaced by the operator. These lights use very little power and unless physically damaged or extreme voltage is applied to them, should last indefinitely. If replacement is necessary, the camera should be returned to the factory.

Reel and Cable Assembly Maintenance

The reel and cable assembly should be kept clean from dirt, slime, grit, etc. When winding the cable back onto the reel after an inspection, it is good practice to use a cloth to wipe off any debris.

WARNING:
Never use a power washer to clean your inspection equipment. Pressurized water may get into unsealed areas such as the usb block, reel hub assembly and slip ring housing causing damage. Water damage to electronic equipment is not covered by your warranty.

TROUBLESHOOTING

APPLY POWER TO UNIT

DO LIGHTS COME ON?

NO

YES

IS AC OUTLET LIVE?

PRESS POWER BUTTON
ON MONITOR.
DOES PICTURE APPEAR?

NO

YES

CHECK DC OUTPUT
OF AC ADAPTOR FOR
12 VOLTS DC

NO

YES

CAMERA IS OPERATING
PROPERLY

REPLACE AC ADAPTER

YES

CONTACT SERVICE DEPARTMENT AT1-905-604-7040
INFO@HATHORNCORP.COM

If a problem not shown on this chart is found, please contact a Hathorn service center.

REPAIR FACILITIES

Hathorn Canada

480 Hood Road, Unit 5
Markham, ON
L3R 9Z3 Canada

Phone: +1 (866) 428-4676
Email: info@hathorncorp.com

Hathorn USA

250 Lowery Court, Unit 2B
Groveport, OH
43125 USA

Phone: (905) 604 7040
Email: usaservice@hathorncorp.com

Minicam Inc HQ & Service Center

12600 Newburgh Road
Livonia
Michigan
48150

Phone: (734) 744 5557
Email: info@minicaminc.com

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